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# The Endocrinology of Aging

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*Science* 17 Oct 1997:  
Vol. 278, Issue 5337, pp. 419-424  
DOI: 10.1126/science.278.5337.419

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## Abstract

Most aging individuals die from atherosclerosis, cancer, or dementia; but in the oldest old, loss of muscle strength resulting in frailty is the limiting factor for an individual's chances of living an independent life until death. Three hormonal systems show decreasing circulating hormone concentrations during normal aging: (i) estrogen (in menopause) and testosterone (in andropause), (ii) dehydroepiandrosterone and its sulphate (in adrenopause), and (iii) the growth hormone/insulin-like growth factor I axis (in somatopause). Physical changes during aging have been considered physiologic, but there is evidence that some of these changes are related to this decline in hormonal activity. Hormone replacement strategies have been developed, but many of their

aspects remain controversial, and increasing blood hormone levels in aging individuals to those found during mid-adult life has not been uniformly proven to be safe and of benefit.

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### Science

Vol 278, Issue 5337

17 October 1997

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